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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,298	11/28/2006	Trevor Lloyd Hughes	57.0552 US PCT	7082

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EXAMINER	
DITRANI, ANGELA M	

ART UNIT	PAPER NUMBER
3676	

NOTIFICATION DATE	DELIVERY MODE
07/09/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Office Action Summary	Application No.	Applicant(s)	
	10/574,298	HUGHES ET AL.	
	Examiner	Art Unit	
	Angela M. DiTrani	3676	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-73* is/are pending in the application.

4a) Of the above claim(s) *1-38* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *39-73* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/28/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The use of the trademarks DOWANOL DPM, DOWANOL EB, DOWANOL PNB, VERSATIC 10, DERTOCAL, MERIGRAL, RESENOL, and GRANOLITE have been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 39-73 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The term "substantially" in independent claims 39, 67, and 73 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The use of the term "substantially" renders the scope of the solubility of the precipitate in hydrocarbons and water indefinite. All claims dependent upon independent claims 39 and 67 are thereby rejected under 35 USC 112 second as well.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 39 and 44-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Garcia (US 3,719,228 – cited by applicant on IDS).

With respect to independent claim 39, Garcia discloses a non-aqueous well bore treatment fluid for selectively reducing the outflow of water during recovery of hydrocarbons from a hydrocarbon reservoir in a formation, the fluid containing 5 to 40 weight percent of a water-immiscible dissolved compound based on α-branched carboxylic acid, derivatives or co-polymers thereof, and capable of forming a precipitate that is substantially soluble in hydrocarbons and substantially insoluble in water.

With respect to depending claims 44 and 45, the reference teaches wherein the melting point of the precipitate is over 50°C, and further over 100°C (col. 2, lines 29-48).

With respect to depending claims 46-49, the reference teaches the well bore treatment fluid as solvent-based, oil-based, a mixture of solvent and oil, and a mixture of solvent and water (col. 3, line 8-col. 7, line 15).

With respect to depending claims 50-54, the reference teaches the precipitate as claimed (col. 2, lines 22- col. 7, line 15).

With respect to depending claim 55, the reference teaches the compound immiscible in a solvent fully miscible with water (col. 3, lines 8-9).

With respect to depending claims 56-66, the reference teaches the carboxylic acid as abietic acid, and further, the limitations of the precipitate thereof; the dissolved compound; and the precipitate as claimed (col. 4, lines 52-61).

With respect to independent claim 67, the reference discloses a method of reducing outflow of hydrocarbons from a hydrocarbon reservoir in a formation, comprising: (a) providing a well bore treatment fluid containing 5 to 40 weight per cent of a water-immiscible dissolved compound based on α-branched carboxylic acid, derivatives or co-polymers thereof, and capable of forming a precipitate that is substantially soluble in hydrocarbons and substantially insoluble in water, and (b) injecting said treatment fluid into a well bore; and (c) letting the fluid permeate formation surrounding the well bore to reduce the outflow of water therefrom.

With respect to depending claims 68-72, the reference teaches the step of injecting acid into the well bore, the step of delaying precipitation, wherein the step further comprises injecting a spacer fluid into the formation before the treatment fluid; injecting water or brine into the formation; and the step of reversing flow direction (see entire disclosure).

With respect to independent claim 73, Garcia discloses a method of reducing the outflow of water during recovery of hydrocarbons from a hydrocarbon reservoir in a formation, comprising: (a) providing a well bore treatment fluid containing 5 to 40 weight per cent of a water-immiscible dissolved compound based on α-branched carboxylic acid, derivatives or co-polymers thereof, and capable of forming a precipitate that is substantially soluble in hydrocarbons and substantially insoluble in water, and (b)

injecting said treatment fluid into a well bore; (c) injecting water or brine into the well bore and; (d) letting the treatment fluid permeate a formation surrounding the well bore to form precipitates in the presence of water in the formation or the injected water or brine to reduce the outflow of water from the formation (see entire disclosure).

7. Claims 39 and 44-73 are rejected under 35 U.S.C. 102(b) as being anticipated by Dill et al. (US 3,797,575 – cited by applicant on IDS).

With respect to independent claim 39, Dill et al. discloses a non-aqueous well bore treatment fluid for selectively reducing the outflow of water during recovery of hydrocarbons from a hydrocarbon reservoir in a formation, the fluid containing 5 to 40 weight percent of a water-immiscible dissolved compound based on α-branched carboxylic acid, derivatives or co-polymers thereof, and capable of forming a precipitate that is substantially soluble in hydrocarbons and substantially insoluble in water.

With respect to depending claims 44 and 45, the reference teaches wherein the melting point of the precipitate is over 50°C, and further over 100°C (col. 2, lines 3-25).

With respect to depending claims 46-49, the reference teaches the well bore treatment fluid as solvent-based, oil-based, a mixture of solvent and oil, and a mixture of solvent and water (col. 2, lines 26-35; col. 2, line 63-col. 3, line 31).

With respect to depending claims 50-54, the reference teaches the precipitate as claimed (col. 4, line 55 - col. 9, line 52).

With respect to depending claim 55, the reference teaches the compound immiscible in a solvent fully miscible with water (col. 2, line 63 – col. 3, line 40).

With respect to depending claims 56-66, the reference teaches the carboxylic acid as abietic acid, and further, the limitations of the precipitate thereof; the dissolved compound; and the precipitate as claimed (col. 4, line 55 - col. 9, line 52).

With respect to independent claim 67, the reference discloses a method of reducing outflow of hydrocarbons from a hydrocarbon reservoir in a formation, comprising: (a) providing a well bore treatment fluid containing 5 to 40 weight per cent of a water-immiscible dissolved compound based on α-branched carboxylic acid, derivatives or co-polymers thereof, and capable of forming a precipitate that is substantially soluble in hydrocarbons and substantially insoluble in water, and (b) injecting said treatment fluid into a well bore; and (c) letting the fluid permeate formation surrounding the well bore to reduce the outflow of water therefrom.

With respect to depending claims 68-72, the reference teaches the step of injecting acid into the well bore, the step of delaying precipitation, wherein the step further comprises injecting a spacer fluid into the formation before the treatment fluid; injecting water or brine into the formation; and the step of reversing flow direction (see entire disclosure).

With respect to independent claim 73, Dill et al. discloses a method of reducing the outflow of water during recovery of hydrocarbons from a hydrocarbon reservoir in a formation, comprising: (a) providing a well bore treatment fluid containing 5 to 40 weight per cent of a water-immiscible dissolved compound based on α-branched carboxylic acid, derivatives or co-polymers thereof, and capable of forming a precipitate that is substantially soluble in hydrocarbons and substantially insoluble in water, and (b)

injecting said treatment fluid into a well bore; (c) injecting water or brine into the well bore and; (d) letting the treatment fluid permeate a formation surrounding the well bore to form precipitates in the presence of water in the formation or the injected water or brine to reduce the outflow of water from the formation (see entire disclosure).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia.

With respect to depending claims 40-43, although Garcia teaches wherein the treatment fluid produces a precipitate that blocks the brine-bearing passages, but, does not react with the petroleum therein to produce a precipitate, the reference fails to

explicitly teach wherein the precipitate is soluble to at least 5.0 weight percent, and further to at least 10 weight percent, in hydrocarbons, as well as wherein the precipitate is less than 1.0 weight percent, and further less than 0.10 weight percent, soluble in water. It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce a precipitate having such properties insofar as because it is known that the solubility of the precipitate of an α-branched carboxylic acid, derivatives or co-polymers thereof, can be tailored by altering the degree and type of branching of the principle straight chain thereof.

11. Claims 40-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dill et al..

With respect to depending claims 40-43, although Dill et al. teaches wherein the treatment fluid produces a precipitate that blocks the brine-bearing passages, but, does not react with the petroleum therein to produce a precipitate, the reference fails to explicitly teach wherein the precipitate is soluble to at least 5.0 weight percent, and further to at least 10 weight percent, in hydrocarbons, as well as wherein the precipitate is less than 1.0 weight percent, and further less than 0.10 weight percent, soluble in water. It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce a precipitate having such properties insofar as because it is known that the solubility of the precipitate of an α-branched carboxylic acid, derivatives or co-polymers thereof, can be tailored by altering the degree and type of branching of the principle straight chain thereof.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. WO 02/11873(cited by applicant on IDS): Jones et al. teaches that the solubility of the precipitate of an α-branched carboxylic acid, derivatives or co-polymers thereof, can be tailored by altering the degree and type of branching of the principle straight chain thereof.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela M. DiTrani whose telephone number is (571)272-2182. The examiner can normally be reached on M-F, 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Gay can be reached on (571)272-7029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AD
06/24/08

/Zakiya W. Bates/
Primary Examiner, Art Unit 3676